

WHAT IS CLAIMED IS:

1. An exerciser comprising:

a frame assembly including a lower frame portion constructed and arranged to be stably supported in an operative position on a horizontal surface and rigid upright frame structure defining laterally spaced left and right free end portions;

a user support assembly operatively connected with said lower frame portion constructed and arranged to support a user thereon; and

left and right moving assemblies disposed in normal inoperative positions with respect to said user support assembly constructed and arranged to be manually engaged and individually manually moved away from the normal inoperative position thereof into a desired extended position by a user supported on said user support assembly,

said left and right moving assemblies comprising:

left and right upper pulley members rotatably mounted on the left and right upper free end portions of said rigid upright frame structure respectively;

left and right lower pulley members rotatably mounted on said frame assembly at fixed positions below said upper pulley members respectively;

left and right flexible elongated structures trained around said left and right upper and lower pulley members respectively;

left and right user hand grip units connected with left and right end portions of said left and right flexible elongated structures extending in

positions to enable a user supported on said user support assembly to move said left and right user hand grip units away from inoperative positions thereof into desired extended positions;

said left and right flexible elongated structures including left and right bungee cords having fixed ends and movable ends provided with stop structure thereon for engaging cooperating stop structure associated with left and right pulley members respectively so as to determine inoperative positions thereof and enable resilient movements therefrom to desired extended positions and to resiliently return said left and right user hand grip units to the inoperative positions thereof when no longer moved by the user; and

connecting structure on said frame assembly constructed and arranged to enable the fixed end of said left and right bungee cords to be fixed in selected fixed positions on said frame assembly which provide selected different resilient bias of said bungee cords when in the inoperative and extended positions thereof.

2. An exerciser as defined in claim 1, wherein said left and right hand grip units are connected with said left and right flexible elongated structures by left and right terminal connectors, respectively.

3. An exerciser as defined in claim 2, wherein said left and right bungee cords comprise left and right series of bungee cords, each bungee cord of each series includes a hook connector selectively connectable with respective left and right terminal connectors enabling each bungee cord of each series to be selectively

retained in said inoperative position or in connected relationship with the associated terminal connector to thereby vary the resilient resistance provided by the bungee cords.

4. An exerciser as defined in claim 2, wherein said cooperating stop structure is associated with said left and right upper pulley members respectively.

5. An exerciser as defined in claim 2, further comprising a pull down bar constructed and arranged to be gripped by one or both hands of a user and to be moved through exercising strokes, said movable ends of said left and right bungee cords being selectively connected to said pull down bar or said left and right hand grip units for movement through operative strokes in response to the exercising strokes of said pull down bar or said left and right hand grip units by the user.

6. An exerciser as defined in claim 5, wherein said left and right flexible elongated structures include left and right flexible elongated non-extensible members each having one end connected to respective movable ends of said left and right bungee cords and having another end trained around respective left and right lower pulley members.

7. An exerciser as defined in claim 6, further comprising a upright pull down unit connected to the frame assembly and including a centrally supported pull down member constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, said left and right bungee cords

being selectively connected to said left and right hand grip units respectively or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said upright pull down unit by the user.

8. An exerciser as defined in claim 7, wherein the upright pull down unit includes a central frame member fixed to said lower frame portion and extending upwardly therefrom and a centrally located pulley member on said central frame member disposed between said left and right free end portions and a central flexible elongated non-extensible member trained over said centrally located pulley member fixed to said centrally supported pull down member, and wherein the left and right lower pulley members are rotatably mounted on said frame assembly such that the left and right flexible elongated non-extensible members are selectively connectable to said central flexible elongated non-extensible member.

9. An exerciser as defined in claim 4, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

10. An exerciser as defined in claim 9, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

11. An exerciser as defined in claim 9, further comprising a upright pull down unit connected to the frame assembly and constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively, said leg unit or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units, the exercising strokes of the leg unit and the exercising strokes of said upright pull down unit by the user.

12. An exerciser as defined in claim 2, wherein said cooperating stop structure is associated with said left and right lower pulley members respectively.

13. An exerciser as defined in claim 12, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or

legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

14. An exerciser as defined in claim 13, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

15. An exerciser as defined in claim 1, wherein said user support assembly includes:

- a user seat member;

- a user seat back member;

- an elongated support member having one end connected to said upright frame assembly and extending in an operative position generally horizontally outwardly therefrom;

- an outer leg structure constructed and arranged to engage and be supported on the horizontal surface in spaced relation to said frame extending in an operative

position in supporting relation with respect to said elongated support member to maintain the elongated support member in said generally horizontally outwardly extending relation from said lower frame portion, seat mounting structure constructed and arranged to mount said user seat member for movement horizontally with respect to said elongated support member when in the operative position thereof between an outer position and an inner position and spaced inwardly of and at generally the same level as said outer position;

seat back mounting structure disposed in supporting relation to said seat back member constructed and arranged to be moved between a bench position extending in generally horizontally aligned relation to said user seat member and an upright position extending generally inwardly in inclined relation to said user seat member in response to the movement of said user seat member between the outer and inner positions thereof respectively.

16. An exerciser as defined in claim 1, said rigid upright frame structure includes left and right rigid upright support members fixed at lower end portions thereof on said lower frame portion and extending upwardly from said lower frame portion when in the operative position thereof, said laterally spaced left and right free end portions being disposed above said lower frame portion in outwardly diverging relation with respect to one another.

17. An exerciser as defined in claim 1, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, wherein said left and right flexible elongated structures trained around said left and right lower pulley members are selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising

strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

18. An exerciser as defined in claim 1, further comprising a upright pull down unit connected to the frame assembly and constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, wherein said left and right flexible elongated structures trained around said left and right lower pulley members are selectively connected to said leg unit or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said leg unit and the exercising strokes of said upright pull down unit by the user.

19. An exerciser as defined in claim 18, further comprising a pull down bar constructed and arranged to be gripped by one or both hands of a user and to be moved through exercising strokes, wherein said left and right flexible elongated structures trained around said left and right upper pulley members are selectively connected to said left and right hand grip units respectively or to said pull down bar for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said pull down bar by the user.

20. An exerciser as defined in claim 19, wherein said left and right bungee cords have one end thereof fixed to said frame assembly and the other end thereof having a hook connector, each hook connector being selectively connectable



with respective left and right terminal connectors configured to engage said cooperating stop structure to enable each bungee cord to be selectively retained in said inoperative position or in connected relationship with the associated terminal connector to thereby vary the resilient resistance provided by the bungee cords.

21. An exerciser as defined in claim 1, wherein said connecting structure is movable with respect to the frame assembly such that the fixed end of said left and right bungee cords can be moved into selected fixed positions on said frame assembly which provide selected different resilient bias of said bungee cords.

22. An exerciser comprising:

a frame assembly including a lower frame portion constructed and arranged to be stably supported in an operative position on a horizontal surface and left and right rigid upright support members fixed at lower end portions thereof on said lower frame portion and extending upwardly from said lower frame portion when in the operative position thereof, said left and right rigid upright support members having integral laterally spaced left and right upper free ends disposed above said lower frame portion in outwardly diverging relation with respect to one another;

a user support assembly operatively connected with said lower frame portion constructed and arranged to support a user thereon; and

left and right moving assemblies disposed in normal inoperative positions with respect to said user support assembly constructed and arranged to be manually engaged and individually manually moved away from the normal inoperative

position thereof into a desired extended position by a user supported on said user support assembly,

said left and right moving assemblies comprising:

left and right upper pulley members rotatably mounted on the left and right upper free end portions of said left and right rigid upright support members respectively;

left and right lower pulley members rotatably mounted on said frame assembly at fixed positions below said upper pulley members respectively;

left and right flexible elongated structures trained around said left and right upper and lower pulley members respectively;

left and right user hand grip units connected with left and right end portions of said left and right flexible elongated structures extending in positions to enable a user supported on said user support assembly to move said left and right user hand grip units away from inoperative positions thereof into desired extended positions;

said left and right flexible elongated structures including left and right bungee cords having fixed ends fixed directly to said frame structure and movable ends provided with stop structure thereon for engaging cooperating stop structure associated with left and right pulley members respectively so as to determine inoperative positions thereof and enable resilient movements therefrom to desired extended positions and to resiliently return said left and right user hand grip units to the inoperative positions thereof when no longer moved by the user.

23. An exerciser as defined in claim 22, wherein said left and right hand grip units are connected with said left and right flexible elongated structures by left and right terminal connectors, respectively.

24. An exerciser as defined in claim 23, wherein said left and right bungee cords comprise left and right series of bungee cords, each bungee cord of each series includes a hook connector selectively connectable with respective left and right terminal connectors enabling each bungee cord of each series to be selectively retained in said inoperative position or in connected relationship with the associated terminal connector to thereby vary the resilient resistance provided by the bungee cords.

25. An exerciser as defined in claim 23, wherein said cooperating stop structure is associated with said left and right upper pulley members respectively.

26. An exerciser as defined in claim 23, further comprising a pull down bar constructed and arranged to be gripped by one or both hands of a user and to be moved through exercising strokes, said movable ends of said left and right bungee cords being selectively connected to said pull down bar or said left and right hand grip units for movement through operative strokes in response to the exercising strokes of said pull down bar or said left and right hand grip units by the user.

27. An exerciser as defined in claim 26, wherein said left and right flexible elongated structures include left and right flexible elongated non-extensible

members each having one end connected to respective movable ends of said left and right bungee cords and having another end trained around respective left and right lower pulley members.

28. An exerciser as defined in claim 27, further comprising a upright pull down unit connected to the frame assembly and including a centrally supported pull down member constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said upright pull down unit by the user.

29. An exerciser as defined in claim 28, wherein the upright pull down unit includes a central frame member fixed to said lower frame portion and extending upwardly therefrom and a centrally located pulley member on said central frame member disposed between said left and right free end portions and a central flexible elongated non-extensible member trained over said centrally located pulley member fixed to said centrally supported pull down member, and wherein the left and right lower pulley members are rotatably mounted on said frame assembly such that the left and right flexible elongated non-extensible members are selectively connectable to said central flexible elongated non-extensible member.

30. An exerciser as defined in claim 25, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

31. An exerciser as defined in claim 30, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

32. An exerciser as defined in claim 30, further comprising a upright pull down unit connected to the frame assembly and constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively, said leg unit or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left

and right hand grip units, the exercising strokes of the leg unit and the exercising strokes of said upright pull down unit by the user.

33. An exerciser as defined in claim 23, wherein said cooperating stop structure is associated with said left and right lower pulley members respectively.

34. An exerciser as defined in claim 33, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

35. An exerciser as defined in claim 34, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

36. An exerciser comprising:

a frame assembly including a lower frame portion constructed and arranged to be stably supported in an operative position on a horizontal surface and left and right rigid upright support members fixed at lower end portions thereof on said lower frame portion and extending upwardly from said lower frame portion when in the operative position thereof, said left and right rigid upright support members having integral laterally spaced left and right upper free ends disposed above said lower frame portion in outwardly diverging relation with respect to one another;

a user support assembly operatively connected with said frame assembly and constructed and arranged to support a user thereon,

said user support assembly including

a user seat member;

a user seat back member;

an elongated support member having one end connected to said upright frame assembly and extending in an operative position generally horizontally outwardly therefrom;

an outer leg structure constructed and arranged to engage and be supported on the horizontal surface in spaced relation to said frame extending in an operative position in supporting relation with respect to said elongated support member to maintain the elongated support member in said generally horizontally outwardly extending relation from said lower frame portion, seat mounting structure constructed and arranged to mount said user seat member for movement horizontally with respect to said elongated support member when in the operative position

thereof between an outer position and a inner position and spaced inwardly of and at generally the same level as said outer position; and

seat back mounting structure operatively associated with said seat back member constructed and arranged to enable said seat back member to be selectively retained in a bench position extending in generally horizontally aligned relation to said user seat member in an outer position thereof and an upright position extending generally inwardly in inclined relation to said user seat member in an inner position thereof,

said upright frame assembly including a lower frame portion constructed and arranged to be stably supported on a horizontal surface, an upstanding portion extending upwardly from said lower frame portion, and a seat support portion extending upwardly from said lower frame portion in horizontally spaced relation to said upstanding portion,

said elongated support member being pivotally mounted on said seat support portion so as to be moved between the operative position thereof and an upright storage position wherein said elongated support member, said outer leg structure and said seat and seat back members are alongside said upstanding portion; and

left and right moving assemblies disposed in normal inoperative positions with respect to said user support assembly constructed and arranged to be manually engaged and individually manually moved away from the normal inoperative position thereof into a desired extended position by a user supported on said user support assembly, said left and right moving assemblies having left and



right portions operatively associated with cooperating structure on said left and right upper free ends.

37. An exerciser as defined in claim 36, wherein said left and right hand grip units are connected with said left and right flexible elongated structures by left and right terminal connectors, respectively.

38. An exerciser as defined in claim 37, wherein said left and right bungee cords comprise left and right series of bungee cords, each bungee cord of each series includes a hook connector selectively connectable with respective left and right terminal connectors enabling each bungee cord of each series to be selectively retained in said inoperative position or in connected relationship with the associated terminal connector to thereby vary the resilient resistance provided by the bungee cords.

39. An exerciser as defined in claim 37, wherein said cooperating stop structure is associated with said left and right upper pulley members respectively.

40. An exerciser as defined in claim 37, further comprising a pull down bar constructed and arranged to be gripped by one or both hands of a user and to be moved through exercising strokes, said movable ends of said left and right bungee cords being selectively connected to said pull down bar or said left and right hand grip units for movement through operative strokes in response to the exercising strokes of said pull down bar or said left and right hand grip units by the user.

41. An exerciser as defined in claim 40, wherein said left and right flexible elongated structures include left and right flexible elongated non-extensible members each having one end connected to respective movable ends of said left and right bungee cords and having another end trained around respective left and right lower pulley members.

42. An exerciser as defined in claim 41, further comprising a upright pull down unit connected to the frame assembly and including a centrally supported pull down member constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said upright pull down unit by the user.

43. An exerciser as defined in claim 42, wherein the upright pull down unit includes a central frame member fixed to said lower frame portion and extending upwardly therefrom and a centrally located pulley member on said central frame member disposed between said left and right free end portions and a central flexible elongated non-extensible member trained over said centrally located pulley member fixed to said centrally supported pull down member, and wherein the left and right lower pulley members are rotatably mounted on said frame assembly such

that the left and right flexible elongated non-extensible members are selectively connectable to said central flexible elongated non-extensible member.

44. An exerciser as defined in claim 39, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

45. An exerciser as defined in claim 44, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

46. An exerciser as defined in claim 44, further comprising a upright pull down unit connected to the frame assembly and constructed and arranged to be engaged by one or both hands of a user and to be moved through exercising strokes,

said left and right bungee cords being selectively connected to said left and right hand grip units respectively, said leg unit or to said upright pull down unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units, the exercising strokes of the leg unit and the exercising strokes of said upright pull down unit by the user.

47. An exerciser as defined in claim 37, wherein said cooperating stop structure is associated with said left and right lower pulley members respectively.

48. An exerciser as defined in claim 47, further comprising a leg unit having a leg engaging member constructed and arranged to be engaged by a leg or legs of a user and to be moved through exercise strokes, said left and right bungee cords being selectively connected to said left and right hand grip units respectively or to said leg unit for movement through operative strokes in response to the exercising strokes of said left and right hand grip units and the exercising strokes of said leg unit by the user.

49. An exerciser as defined in claim 48, wherein said leg-engaging unit is pivoted to an outer end portion of said user support assembly with which an elongated flexible non-extensible element is connected, said leg-engaging unit having a pair of horizontally aligned and fixedly spaced leg-engaging members pivotally movable therewith from a normal inoperative position disposed outwardly of said user support assembly wherein a user supported on said user support assembly is enabled to engage lower forwardly facing portions with legs and move

said leg-engaging members thereby from said inoperative position to an extended position spaced upwardly and outwardly from the inoperative position thereof.

50. An exerciser as defined in claim 36, wherein said seat back member and said user seat member are movable in response to one another when (1) said seat back member is selectively retained in the bench position thereof and said user seat member is in the outer position thereof and when (2) said seat back member is selectively retained in the an upright position thereof and said user seat member is in an inner position thereof.